

Flying scholars and the rise of flatulence: the scientific fantasy of Aristophanes' *Clouds*

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Plato implies that Aristophanes' treatment of Socrates in *Clouds* was a factor leading to Socrates' condemnation in court. But how seriously should we take the elaborate scientific fantasy of *Clouds*? Phillip Horky argues that we should take it very seriously indeed.

In the history of philosophy, few first appearances are more memorable than the fantastic introduction of Socrates in Aristophanes' *Clouds*, first performed in Athens in 423 B.C. Gliding aloft in a basket, propped up by a crane, Socrates asks the simple buffoon Strepsiades, who has come to learn the philosophic arts, 'Why do you call on me, mere creature of a day?'. At once, the audience knows that this strange man isn't fit for terrestrial pursuits; he 'walks on air, and studies the sun from above', so as to mingle his peculiar cleverness with the ether. He's trying to figure out what goes up, and what's going down, which he wouldn't be able to do from the ground.

For the comic action of the play to start, Socrates must descend to Strepsiades' level and cool the old stallion off; once Socrates orders Strepsiades to 'sit down on the holy bed' in order to be initiated into his school of philosophy, the Thinkery, his arrival on earth is complete. The audience is now ready to see this 'wise guy' (*sophos*) in action.

What goes up must come down

It might be surprising to learn that Aristophanes' *Clouds* is the earliest surviving popular representation of intellectuals and their educational methods in ancient Greece: to the Athenian audience, this is what a philosopher looks like. Perhaps even more surprising in this rollicking scientific fantasy, the first of its kind, is Aristophanes' focus on the relationship between 'high' and 'low', what I will call 'antipodal comedy'.

In English, 'antipodal' literally means

'situated at opposite positions', from the Greek *anti-* (opposite to) and *pous* (the foot); conceptually, then, 'antipodal comedy' deals with the relationship between low-level and high-level humour. In effect, Aristophanes emphasizes the inversion of 'high' and 'low' in the *Clouds*, thereby developing a special relationship between high and low comedy.

This inversion of high and low had already been anticipated several times in the play before Socrates' divine arrival, in particular with reference to mouths, eyes, and ... arses. In one passage, a student narrates to Strepsiades that a great discovery of Socrates had been aborted, owing to a shitting lizard. As Socrates was staring up at the circuits of the moon and 'yawning' into the night, a lizard on the roof above 'got him!' – and the poor students subsequently lost their dinner – but Socrates got his. Aristophanes has anticipated Newton in the formulation of his First Law of Motion: what goes up must come down.

The up-down jokes don't end there. Once Strepsiades has actually entered the Thinkery, he remarks that many of Socrates' students are wholly bent over in scientific study. Their faces near the ground, and their arses pointing towards the skies. Strepsiades, still thinking of his empty stomach, assumes they're hunting after some truffles. The student corrects him: 'they're searching the darknesses under Tartarus'. These are dark places of wisdom, indeed.

Aristophanes and Plato on Socrates' philosophy

But there is more to the students' grotesque antipodal pose: 'so why does their arsehole look up at the heavens?', Strepsiades asks. The student's answer could make anyone double over – with laughter:

[The arsehole], in itself, learns how to study the stars.

The description of the student's 'arsehole' as 'in itself' is astonishing: it is the same language Plato's Socrates would, some 30 years later, use to describe the definition of excellence 'in itself' in the dialogue *Meno*, a phrase that would come to be a standard expression in Plato's dialogues for a 'Form', an absolute ideal 'thing in itself'. What makes something beautiful, say, a painting, or a building, or Helen? For Plato, it is the thing we know to be beautiful without qualification, the thing 'in itself', which could never be confused with anything that is not beautiful. Plato calls that thing the 'Form of the beautiful'. Does Aristophanes' scientific fantasy anticipate Plato's theory of the Forms, some three decades before Plato would associate it with Socrates?

It is difficult to know for sure, but the joke works better if this is a stock Socratic phrase. At any rate, the point for Aristophanes' audience is to figure out who the butt of the joke is. That scholar 'in itself' which is best situated to study the stars...is an arsehole; all indications on stage point to the divine Socrates flying high up above. The upward gaze, a distinguishing mark of philosophical inquiry, has been wholly inverted, to stratospheric heights of ribaldry.

Interdisciplinary study in Socrates' Thinkery

The students' antipodal pose indicates that lofty study of astronomy is associated with the vulgar pursuit of things under the earth, a.k.a. geology. In the other courses

of interdisciplinary study that Socrates' Thinkery also offers, it is the relationship between the things that are up above and the things that are down below that provides the foundation for Socratic teaching.

In one case, Strepsiades is asked to figure out the fundamental laws that the sciences of meteorology, aerodynamics, and gastroenterology all share. The phenomenon of thunder, far from being caused by Zeus – who doesn't exist anyway, according to Socrates – is the product of the *Clouds* crashing together:

SOCRATES: Whenever they're bloated with water and forced to lug it around, Drooping and gorged on rain by necessity – boom! The hulks crash Into one another, crackle, and let roll a rrrrrumble!

STREPSIADES: Who forces them to lug it around? Zeus?

SOCRATES: Not at all! The 'Cosmo-whirl' (Dinos).

STREPSIADES: 'Cosmo-whirl'? Must've missed that one. There is no Zeus – all hail the new king, 'Cosmo-whirl'! Hold up; you haven't yet taught me about the rumbling and crackling.

SOCRATES: Didn't you hear my lecture, 'On the Clouds', bursting at the seams? It's the pressure that crashes them into one another, and causes that rumbling.

STREPSIADES: Yeah, how you gonna prove THAT?

Strepsiades seeks proof that it's pressure which causes the *Clouds* up on high to issue forth thunder. Socrates in response uses a particularly potent form of analogy to give the ins and outs of meteorological phenomena: the man himself.

SOCRATES: Why, my teaching will proceed from you yourself. Remember the meat-soup at the Panathenaia – when you wolfed it down, Got cramps, and – Eureka! – your stomach started rumbling?

STREPSIADES: By George, that was awful! Meat soup...those cramps, Then the rumbling, and a fart rips, just like thunder! First a gurgle, pappax pappax...builds to a crescendo, PAPpappaSSSSSS... Then blasting, a veritable thunder-clap! PAPAPAPPAX!!!

SOCRATES: So, then, consider how explosive your flatus was. Wouldn't the heavens, in their

infinity, make the most explosive flatus?

For the terms 'flatus' and 'thunder' are, of course, one and the same.

Socrates' explanation for why thunder occurs assumes that the interdisciplinary 'principle of the cosmo-whirl' (let's call it 'PC') provides the reason why, in both the heavens and Strepsiades' gastro-intestinal system, apparently random explosions occur. Socrates' interdisciplinary approach assumes that the scientific laws that govern the rotation of the divine astral bodies are the same laws that govern the carnival meat-soup in Strepsiades' belly.

The principle of the cosmo-whirl and its logic

But there is more to Socrates' discovery of the master science: Aristophanes has preserved some sort of philosophical argument, which we can reconstruct by working generally backwards from his claims.

Socrates' principle of the cosmo-whirl (PC):

- 1 Pressure causes farting in Strepsiades' belly.
- 2 Farting and thunder are the same thing.
- 3 Therefore, pressure causes thunder in Strepsiades' belly.
- (4 The heavens are subject to the same laws of nature as Strepsiades' belly. [unstated premise])
- (5 Pressure is a law of nature. [unstated premise])
- 6 Thus, the heavens are subject to the law of pressure.
- 7 Thus, pressure causes thunder in the heavens.
- 8 The heavens are infinite.
- 9 Strepsiades' belly is finite.
- (10 What is infinite is bigger than what is finite. [implied premise])
- 11 Thus, the heavenly farts are bigger than the farts of Strepsiades' belly.

Such is the argument implied by PC, at least according to our new teacher of formal logic. Like Strepsiades, a savvy Athenian audience would have been near bursting point, under the weight and pressure of Socrates' scientific demonstration.

In this argument, the audience will have recognized in the absurd explanations of Socrates an array of current intellectual fashions. There are some bits of the natural science of Anaxagoras, the famous atheist whose cosmo-logy was founded on the same 'Principle of Cosmo-whirl' as Socrates' meteorology/aerodynamics/gastroenterology. And then there's the relativism of Protagoras' famous dictum, 'man is the measure of all things, of things that are that they are, of things that are not that they are not', now on sale to the Athenian everyman – in this

case the vulgar Strepsiades, all too ready to see himself as the star attraction of the cosmos. Quite possibly the Athenian audience would think of Pythagoras, too, whose prohibition on the eating of beans was thought in antiquity to have been part of an anti-flatulence initiative: if you don't want to disrupt your soul, or cause a tremor in the cosmos just abstain from beans – and, above all else, that foul meat-stew being sold on the roadside at the Panathenaic festival.

Aristophanes' antipodal comedy

Aristophanes' antipodal comedy, then, makes best sense if the audience knows something about the many characters and intellectual trends this Socrates appears to embody. This is important, because it also helps to explain the significance of Aristophanes' play for scholars and readers of all types today. Aristophanes' *Clouds* is the earliest surviving popular representation of what Greek intellectuals did. It puts on show the many tricks these 'wise guys' (*sophoi*) used to swindle their way into the Athenians' pockets. One of those tricks was perfectly suited for comic inversion: the notion that the studies of what is 'up' and what is 'down' are subject to the same laws.

Literary scholars refer to the comedy that relates to the stomach, intestines, and the other shadowy nether parts as 'lower-stratum humour'. This kind of comedy is characterized by the primary needs for survival, such as eating, drinking, defecating, and urinating, and it has been thought to be an expression of the celebration of human living. What Aristophanes shows us in the *Clouds* is that, for this type of humour to work as effectively as possible, it needs to be coupled with 'upper-stratum humour', which satirizes the ways we think about thinking and learning. Antipodal comedy of the sort associated with Socrates in the *Clouds* stimulates belly-laughing and intellectual curiosity all at the same time, providing an indelible first image of the most celebrated and imitated philosopher who ever lived.

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